

DETAILED ACTION

1. This action is in response to the Preliminary Amendment filed on 11/7/2005, claims 1-16 are pending.

Information Disclosure Statement

2. Applicant is informed that all the foreign patent documents cited in the Information Disclosure Statement filed 11/7/2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

3. The disclosure is objected to because of the following informalities:

The phrase “flow or steam” on page 3, line 28 of the specification is misspelled. The phrase should be spelled - - flow or stream - -, so as to be consistent with the phrase on page 2, line 33. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5-8, 10, 12, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferguson et al. (U.S. Patent No. 5,755,113).

Regarding claim 1, Ferguson et al. discloses in Figure 3, a coolant condensing device (i.e. condenser) (22) with a multiplicity of through flow devices (i.e. flat tubes) (28), which are parallel to one another, with two collecting devices (i.e. manifolds) (24 and 26), fluidly connected at the ends of the flow through devices. Furthermore, a separating device (i.e. baffle) (34) subdivides the collection devices into multiple regions, which are essentially gas and liquid tight, a collector (i.e. dryer) (46), which is arranged essentially parallel to the collecting device, and has at least two fluid connections (i.e. inlet and outlet) (48 and 52) connected to two different regions of the collecting device. Also, the flow direction of the coolant is essentially parallel to the flow direction of the coolant within the collector (Column 2, lines 38-67 and column 3, lines 1-42).

Regarding claim 2, Ferguson et al. discloses in Figure 3, a fluid connection (i.e. outlet) (54) wherein the flow direction of the coolant in a portion is essentially opposite to the flow direction within the collector (Column 3, lines 25-41).

Regarding claim 3, Ferguson et al. discloses in Figure 3, a one piece collector (i.e. dryer) (46).

Regarding claim 5, Ferguson et al. discloses in Figure 3, a collector (i.e. dryer) (46) having at least one component which is designed in the form of an extruded profile. It is noted that the bottom portion near outlet (54) is considered to be an extruded profile.

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Regarding claim 6, Ferguson et al. discloses in Figure 2, a collector (i.e. dryer) (46) having at least one tubular component of a predetermined thickness. It is noted that the outer housing of the component is tubular in shape and has a predetermined wall thickness.

Regarding claim 7, Ferguson et al. discloses in Figure 3, a fixed connection between collector (i.e. dryer) (46) and the collecting device (24) at inlet (48).

Regarding claim 8, Ferguson et al. discloses in Figure 2, a collector (i.e. dryer) (46) having a cover connected to it.

Regarding claim 10, Ferguson et al. discloses in Figure 3, two fluid connections (i.e. inlet and outlet) (48 and 52) provided between the collecting device (24), having one fluid connection leading into a first region and the second connection leading into a second region spaced apart from the first region.

Regarding claim 12, Ferguson et al. discloses in Figure 3, the collector (i.e. dryer) (46) offset laterally to a plane spanned by the collecting device and through flow devices.

Regarding claim 13, Ferguson et al. discloses in Figure 3, a collecting device (24) with multiple separating devices (i.e. baffles) (34) subdivides the collection devices into multiple regions, which are essentially liquid tight (Column 3, lines 1-5).

Regarding claim 15, Ferguson et al. discloses in Figure 3, a collector (i.e. dryer) (46) has a connecting device (48) for connection to a fluid connection (i.e. outlet from collecting device (24)).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 4, 11, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al. (U.S. Patent No. 5,755,113) in view of Nobuta et al. (U.S. Pub. No. 2003/0051503 A1).

Regarding claim 4, Ferguson et al. discloses all the claimed limitations except the collector consisting of a plurality of parts. However, Nobuta et al. discloses in Figures 6A and 6B assembling steps for multiple parts of a condenser (Paragraph [0060]). Hence, it would have been obvious at the time of the invention, to one of ordinary skill in the art, to combine the teachings of Ferguson et al. with the condenser consisting of multiple parts of Nobuta et al. in order to better customize each condenser to its specific needs (i.e. amount of pressure it needs to withstand). The motivation to combine is that customizing the parts would improve the condenser and increase the overall efficiency of the coolant device.

Regarding claim 11, Ferguson et al. discloses all the claimed limitations except having one fluid connection lead into an essentially end face portion of the collector. However, Nobuta et al. discloses in Figure 1, a fluid connection (i.e. communication hole) (33) leading into an essentially end portion of the collector. Hence, it would have been obvious at the time of the invention, to one of ordinary skill in the art, to combine the teachings of Ferguson et al. with the connection near the end face portion of the collector of Nobuta et al. in order to better control the flow direction through the collector and decrease the turbulence of the fluid. The motivation to combine is that the efficiency would be improved.

Regarding claim 14, Ferguson et al. discloses all the claimed limitations except a filter device which is removable from the collector. However, Nobuta et al. discloses a filter (36) is connected to an installation pedestal which is detachable (Paragraph [0042]). Hence, it would

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have been obvious at the time of the invention, to one of ordinary skill in the art, to combine the teachings of Ferguson et al. with the detachable filter of Nobuta et al. in order in order to remove the filter for cleaning or replacement. The motivation to combine is that replacing the filter would increase the overall efficiency.

Regarding claim 16, Ferguson et al. discloses all the claimed limitations except a connection between two devices which is a weld, adhesive bond, rivet, or the like. However, Nobuta et al. discloses a receiver unit (device 1) and a header tank (device 2) assembled integrally by brazing (Paragraph [0034]). Hence, it would have been obvious at the time of the invention, to one of ordinary skill in the art, to combine the teachings of Ferguson et al. with the brazing connections of Nobuta et al. in order to better secure the devices together. The motivation to combine is that the amount of leakage would be reduced.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al. (U.S. Patent No. 5,755,113) in view of Burk (U.S. Patent No. 5,419,141).

Regarding claim 9, Ferguson et al. discloses all the claimed limitations except a cover which is removable with respect to the collector. However, Burk discloses a collector with a removable cover (Column 1, lines 43-47). Hence, it would have been obvious at the time of the invention, to one of ordinary skill in the art, to combine the teachings of Ferguson et al. with the removable cover of Burk in order to access the inside of the collector more easily. The motivation to combine is that maintenance time could be reduced and efficiency of the collector would be increased.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shibata et al. (U.S. Pub. No. 2002/0073730 A1) discusses a condenser for a vehicle.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON M. ROSATI whose telephone number is (571)270-3536. The examiner can normally be reached on Monday-Friday 8:00am- 4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Cheng can be reached on (571)-272-4433. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMR
12/19/2007

/Joe H Cheng/
Supervisory Patent Examiner
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